Quality Control

Memo

												DQA:	pate:	
NCR:	Yes	/ No					WORK ORDER NON-C	100	VFOR	MANCE / UPI	DATE			0
							.					QA Closed:	Date:	
Nork Ord	er:						DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
Part i	No.						Rework Scrap Use-as-is			Skid-tube Machining noforming	Crosstube Small Fab Finishing		Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR I	Vo.						Work Order Update]		Large Fab	Composite	_	Supplier	
Root					Des	cri	ption of work order update	П	Initial	Act	tion	Sign &		
Cause		Date	Step	Qty			or Non-conformance	Ch	ief Eng	- Descr	ription	Date	Verification	QC Inspector
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Landi	ng (3ear					General		-					
		Bending					Bend		Grain		L	Ovalized		Pressure/Forced
		Centre No	t Concer	ntric to (o/s		BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks					Broken/Damaged	L	Inspect	ion Incomplete		Part Incorred	ct	Weld
		Crushed/0	Crimped,				Burrs		Instruct	ions Incomplete/L	Unclear	Part Lost/Mi	issing	Wrong Stock Pulled
		Cuffs					Contamination		Mainte	nance		Part Moved		
		Heat Trea	t				Countersink		Mislabe	eled		Positioned V	V rong	
		Inspection	າ Strip in	Tube			Cut Too Short		Misread	ţ	Γ	Power Loss/	Surge	Other
		Ripples in	Bend		1		Drill Holes		Offset			_	<u> </u>	

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID 93362 Page 2 November-19-12 8:59:40 AM Item ID: 646.3911 Accept *N900040100* Setup Start **Revision ID:** Stop Item Name: Shim **Start Date:** 11/15/12 **Start Qty: 20.00 Cust Item ID:** Required Date: 12/07/12 Req'd Qty: 20.00 **Customer:** Reference: Run Process Plan: Date: Tooling: Approvals: Date: Stop Date: _____ SPC (Y/N): Date: Set Up/ Tool # Plan Sequence ID/ Operation **Tool ID** Reject Accept Reject Insp. Qty Work Center ID Code Otv Number Stamp **Description Run Hours** 130 QC8- Inspect parts - second check *130* QC Memo 12 11-28 Quality Control Outsource process-Cadplate per QSI017 4.1.9.1 140 0.00 Pl 12-5-12 *140* Outsource3 0.00 Outsource process - Cad plate 150 Receive & Inspect for Damage & Mat'l Certs 0.00 *150* Packaging 0.00 Memo Packaging

											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-	CONF	ORN	NANCE / UPDATE				r.
								Q				Date	
Work Ord	er:					DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part I	-					Rework Scrap Use-as-is Work Order Update	Th	N nerm	Skid-tube Crosstube Machining Small Fab noforming Finishing Large Fab Composite			Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update	Initia	al	Action	·	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Chief I	Eng	Description		Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	Ш									١			
Operator	Ш									1			
Material	Ш						1	•					
Setup	Ц												
Other	Ц												
Process	Ц									,			
Supplier	Ц									ŀ			
Training	Ш							-\					
Unapproved	Ш												
							FAULT C	ATEC	GORY				
Landi	$\overline{}$				_	General			·			_	_
	_	Bending				Bend	Gra			\vdash	Ovalized	_	Pressure/Forced
	-	Centre No	ot Concer	ntric to (^{O/S}	BOM/Route		dwa		$\boldsymbol{\vdash}$	Over/Under	<u> </u>	Temperature/Cure
	-	Cracks				Broken/Damaged			ori Incomplete	\vdash	Part Incorre	<u> </u>	Weld
	\vdash	Crushed/0	Crimped.		<u> </u>	Burrs	-		ons Incomplete/Unclear	-	Part Lost/Mi	ssing	Wrong Stock Pulled
	\vdash	Cuffs			-	Contamination	-		nance	\vdash	Part Moved		
		Heat Trea			<u> </u>	Countersink	\vdash	labe			Positioned V		¬
		Inspection		Tube	<u> </u>	Cut Too Short		read		Ш	Power Loss/	Surge	Other
		Ripples in			<u> </u>	Drill Holes	Off			-			
		Torque W		xtrusio	٦	Drawing	—		alibration	-			
'	1 1	Turning So	equence			Finish	Out	t of S	Out of Sequence				

Outside Dimensions

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde November-19-12				*933	62*							Page 3
Item ID: Revision ID: Item Name:	646.3911 Shim			Accept	*N900	040	100)*	Setup	Start Stop	*N:	S1* S2*
	11/15/12 12/07/12	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item I Customer:	D:						
Approvals:		n:	Date:	Tooling: SPC (Y/N):		ate:			Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center II 160 *160* QC Quality Control	D	Operation Description QC5- Inspect part compl	eteness to step on W/O	Set Up/ Run Hours 0.00 15	Tool ID	Tool#	Plan Code	Accept Qty	t Rej Qty		Reject Number	Insp. Stamp
170 *170* Packaging Packaging		Identify as per dwg & St Memo ***IDENTI REV***	ock Location: <u>5</u> /35 D FY AS PER APICAL MPP	0.00 0.00 -120 BY STAMPING THI	E P# AND				_(_	<u> </u>) 2/2/5	39
180 *400*		QC21- Final Inspection	- Work Order Release	0.00						[3]	2/4	,

0.00

Memo

Quality Control

\$13.08.W.

NCR:	Yes	/	No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA:	Date:	,
		*

									QA Closed:	Date:	
Work Orde	er:				DISPOSITION			AGAINST DE	PARTMENT,	/PROCESS	
Part N					Rework Scrap Use-as-is Work Order Update	Ther	Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Initial	Ad	ction	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief En	Desc	cription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process					•						
Supplier			ļ								
Training											
Unapproved			<u> </u>				<u> </u>				
						AULT CAT	GORY				
Landi	ng Gear				General				•		_
	Bending				Bend	Grain			Ovalized		Pressure/Forced
	Centre N	lot Conce	ntric to	o/s	BOM/Route	Hardw	are		Over/Under	tolerance	Temperature/Cure
:	Cracks				Broken/Damaged	Inspec	tion Incomplete		Part Incorred	ct	Weld
		/Crimped			Burrs	Instru	tions Incomplete,	/Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs			ļ	Contamination	Main	enance		Part Moved		
	Heat Tre	at			Countersink	Mislab	eled		Positioned V	Vrong	_
		on Strip in	Tube	<u></u>	Cut Too Short	Misre	ıd	-	Power Loss/	Surge	Other
	Ripples i				Drill Holes	Offset					
		Waves in E		n <u> </u>	Drawing	Out of	Calibration				
	Turning	Sequence		L	Finish	Out of	Sequence				
	Wave/T	wist in Tul	oe		Folio	Outsid	e Dimensions		<u> </u>		

2 Picklist Print

November-19-12 8:59:40 AM

Page

Work Order ID:

93362

Parent Item:

646.3911

Parent Item Name:

Shim

Start Date: 11/15/12

Required Date: 12/07/12

Start Qty: 20.00

Loc Code

Required Qty: 20.00

Component Itam ID/	Donlogoment	NAS~/	D:	Duimaan
Comments:	IPP REV:A 12.10.2	3 NEW ISSUE	DD V	ERF:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MC1095S.032		Purchased	No			110	sf	12.0000	0.03	0.6315789		-11-2	7
C1095 Blue Tempered Spi	ring Steel Sheet .032								***************************************	- AVENUAL DE	11312		

Loc Oty Location MAT 12

> 123537 12



NOR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE QA Closed: Date: Disposition AGAINST DEPARTMENT/PROCESS Rework Scrap Water Jet Engineering Small Fab Prod. Eng. Coor. Quality NCR No.	her
Nork Order: Part No.	her
Part No. Par	her
Part No	her
Root Cause Date Step Qty Or Non-conformance Chief Eng Description Date Verification QC Inspector Coc/Data Deperator Internal Cause Cocess Dupplier Cause Cocess Cause Cocess Dupplier Cause Cocess Cause Cause Cocess Cause Cause Cocess Cause Cause Cocess Cause Cause Cause Cocess Cause Ca	
Cause Date Step Qty or Non-conformance Chief Eng Description Date Verification QC Inspector oc/Data quip/Tooling perator laterial etup ther rocess quiplier raining —	ector
oc/Data	pector
quip/Tooling perator	
napproved	
FAULT CATEGORY	
Landing Gear General	
Bending Bend Grain Ovalized Pressure/Forced	
Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cu Cracks Broken/Damaged Inspection Incomplete Part Incorrect Weld	e/Cure
Cracks Broken/Damaged Inspection Incomplete Part Incorrect Weld Crushed/Crimped. Burrs Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pul	
Cuffs Contamination Maintenance Part Lost/Missing Wrong stock Put	k Bulled
Heat Treat Countersink Mislabeled Positioned Wrong	k Pulled
Inspection Strip in Tube Cut Too Short Misread Power Loss/Surge Other	k Pulled
Ripples in Bend Drill Holes Offset	k Pulled
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Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	93362
Description: SHW	Part Number:	646-3911
Inspection Dwg: 46-341 Rev: NC		Page 1 of 1

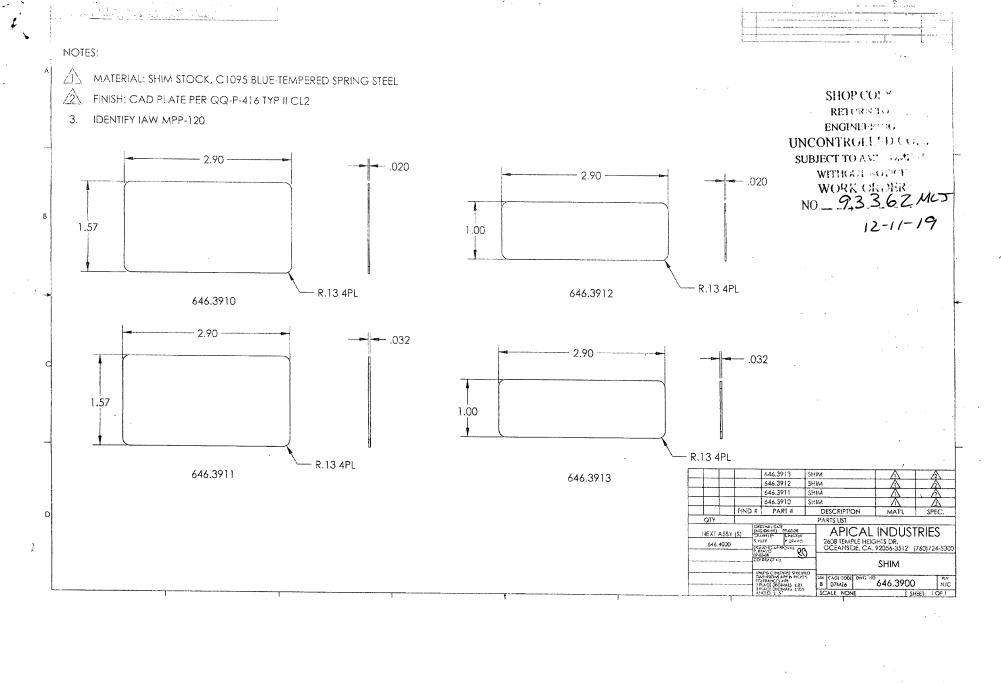
FIRST ARTICLE INSPECTION CHECKLIST

Drawing		Actual		[
Dimension	Tolerance	Dimension	Accept	Reject	Method of Inspection	Comments
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Measured by:	1B
Date:	12-11-21

Audited by:	15
Date:	12-7128

Preliminary Approval:	
Date:	



CERTIFICATE OF CONFORMANCE

CADORATH PLATING CO. LTD. 2150 LOGAN AVENUE WINNIPEG, MANITOBA R2J-0J1

DATE:

Jan-08-2013

CONSIGNED TO: Dart Aerospace Ltd.

1270 Aberdeen St.

Hawksbury, ON K6A 1K7

W/O #:

120746

INVOICE #:

64009

CONTRACT OR

PURCHASE ORDER #

PO18582

DESCRIPTION:

SHIM

QTY

20

P/N # 646.3911

S/N # 93362

STRIP AND CADMIUM PLATING IAW AMS-QQ-P-416C TYPE 2 CLEAR CLASS 2. BAKE HEAT CHART # 13-14.

CERTIFICATE: I certify that the items indicated here on have been inspected and tested and conform to all specifications and requirements detailed on the contract or purchase order.

Approved Inspector: